What is claimed is:

1. An optical communication device, comprising:

a light source that emits a light beam for transmitting data;

an optical fiber having an entrance face through which the light beam emitted from said light source enters said optical fiber, said entrance face having a core region and a cladding region, said cladding region having higher reflectivity than said core region at least at an area defined in a vicinity of said core region;

a beam spot moving mechanism that moves a beam spot formed by the light beam emitted from said light source on said entrance face of said optical fiber in first and second directions;

a light detector having a light receiving surface for detecting a light amount of the light beam reflected by said entrance face of said optical fiber, said light receiving surface being divided into multiple light detecting areas; and

a controller that controls said beam spot moving mechanism to adjust light amounts detected by said light detecting areas to have a predetermined ratio.

2. The optical communication device according to claim 1,

wherein said light receiving surface is divided into four light detecting areas by two boundary lines passing through a center of said light receiving surface, and

wherein said controller controls said beam spot moving mechanism to adjust light amounts detected by said light receiving surface on both sides of said first boundary line to have a first predetermined ratio and light amounts detected on both sides of said second boundary line to have a second predetermined ratio.

3. The optical communication device according to claim 2, wherein said light detector is arranged such that a beam spot formed on said light receiving surface by the light beam reflected by said entrance face of said optical fiber moves along said first and second boundary lines as said beam spot moving mechanism moves the beam spot formed on said entrance face of said optical fiber in the first and second direction, respectively.

4. The optical communication device according to claim 2, wherein said light detector is arranged such that a beam spot formed on said light receiving surfaces by the light beam reflected by said entrance face of said optical fiber moves along lines bisecting corners formed between said first and second boundary lines as said beam spot moving

mechanism moves the beam spot formed on said entrance face in the first and second direction.

5. The optical communication device according to claim 2, wherein said controller controls said beam spot moving mechanism so that the light amounts detected by said light detecting areas become the same.

6. The optical communication device according to claim 2, wherein each of said light detecting areas has an inner zone and an outer zone arranged to receive the light beam reflected at said core region and said cladding region, respectively, and

wherein each of said light detecting areas has a higher sensitivity at said inner zone than at said outer zone.

7. The optical communication device according to claim 6, wherein the light amount received by a given one of said light detecting areas is obtained from the following equations,

$$L = A + \alpha B$$

$$\alpha = a/b$$

where L represents the light amount received by said given one of said light detecting areas, A and B represent the

light amount received by said outer and inner zones of said given one of said light detecting areas, respectively, and a and b represent the sensitivity of said inner and outer zones, respectively.

8. The optical communication device according to claim 1, wherein said beam spot moving mechanism includes:

a first converging lens that converges the light beam emitted from said light source on said entrance face of said optical fiber; and

an actuator that moves said first converging lens in the first and second directions.

9. The optical communication device according to claim 8, further comprising a second converging lens that converges the light beam reflected at said entrance face of said optical fiber on said light receiving surface of said light detector,

wherein said light receiving surface and said entrance face are conjugate with respect to said second converging lens.

10. The optical communication device according to claim 1,

wherein each of said light detecting areas is paired with another one of said light detecting areas, and

wherein said controller controls said beam spot moving mechanism to adjusts light amounts detected by said light detecting areas to have a predetermined ratio by adjusting the light amount detected by each of said light detecting areas in accordance with the light amount detected by said light detecting area paired therewith.

11. The optical communication device according to claim 1, wherein said area of said cladding region having higher reflectivity is provided with a mirror surface coating formed by evaporation.

12. A device for optically coupling a light source to an optical fiber, comprising:

a holder that holds the optical fiber so that a light beam emitted from the light source impinges on an end face of the optical fiber;

a detector that detects displacement of an incident position of the laser beam on the end face of the optical fiber from a predetermined position on the end face based on the light beam reflected by the end face; and

an adjuster that adjusts the incident position of the light beam on the end face of the optical fiber based on an output from said detector.

13. The device according to claim 12,

wherein said detector has a plurality of light detecting areas that detect light amounts of the light beam incident thereon, and

wherein said light detecting areas are arranged so that the light amounts are detected in a predetermined ratio when the light beam is incident on the predetermined position of the end face of the optical fiber.

14. The device according to claim 13, wherein said light detecting areas are arranged so that light amounts detected by said light detecting areas are the same when the light beam emitted from the light source is incident on the predetermined position of the end face of the optical fiber.

15. The device according to claim 14,

wherein said detector has a light receiving surface divided into quarters by first and second boundary lines to define four light detecting areas that detect amounts of light incident thereon, and

wherein said detector is disposed so that the light beam reflected by the end face of the optical fiber at the predetermined position thereof impinges on a point of intersection of said first and second boundary lines.

16. The device according to claim 15,

wherein said adjuster adjusts the incident position of the light beam on the end face of the optical fiber by shifting an optical path of the light beam in first and second directions, and

wherein said detector is disposed so that the incident position of the light beam on said light receiving surface shifts in parallel with said first and second boundary lines as said adjuster shifts the optical path of the light beam in said first and second directions.

17. The device according to claim 15,

wherein each of said light detecting areas includes inner and outer zones that respectively receive the light beam reflected by a core region and a cladding region of the end face of the optical fiber, and

wherein said inner zone has higher sensitivity than said outer zone.

18. The device according to claim 12,

wherein said adjuster includes a light beam converging lens that converges the light beam emitted from the light source on the end face of the optical fiber, and

wherein the incident position of the light beam on the end face of the optical fiber is adjusted by moving said

light beam converging lens.

19. The device according to claim 12, further comprising a reflected light converging lens that converges the light beam reflected by the end face of the optical fiber on a light receiving surface of the light position detector,

wherein said reflected light converging lens is disposed so that said light receiving surface of the light position detector and the end face of the optical fiber are conjugate with said reflected light converging lens.

20. A method for positioning light incident on an entrance face of an optical fiber in an optical communication device for transmitting data through the optical fiber, comprising:

detecting light reflected at the entrance face of the optical fiber by a light detector having a light detecting surface divided into a plurality of light amount detecting areas by a plurality of boundary lines each passing through a center of the light detecting surface; and

positioning light incident on the entrance face of the optical fiber so that the light amount detecting areas detect light amounts in a predetermined ratio.